

L Number	Hits	Search Text	DB	Time stamp
1	15993	biotin and (hyperlipid\$10 or dyslipid\$10 or lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:54
2	541	biotin near100 (hyperlipid\$10 or dyslipid\$10 or lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:54
3	460	biotin near25 (hyperlipid\$10 or dyslipid\$10 or lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:54
4	315	biotin near5 (hyperlipid\$10 or dyslipid\$10 or lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:54
5	53	biotin near (hyperlipid\$10 or dyslipid\$10 or lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:55
6	1	biotin near25 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:55
7	1060	biotin and (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB	2003/10/25 17:55
8	2	biotin near1000 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
9	0	biotin near99999 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
10	2	biotin near9999 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
11	2	biotin near900 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
12	2	biotin near500 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
13	2	biotin near250 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:56
14	2	biotin near100 (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:57
15	0	biotin near (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:57
16	1066	biotin and (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 17:57
17	132	biotin and (hyperlipid\$10 or dyslipid\$10 or serum near5 lipid\$10) and chromium	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:05

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ACCESSION NUMBER: 1999210616 EMBASE  
TITLE: High-dose biotin, an inducer of glucokinase expression, may synergize with chromium picolinate to enable a definitive nutritional therapy for type II diabetes.  
AUTHOR: McCarty M.F.  
CORPORATE SOURCE: Dr. M.F. McCarty, NutriGuard Research, 1051 Hermes Avenue, Encinitas, CA 92024, United States  
SOURCE: Medical Hypotheses, (1999) 52/5 (401-406).  
Refs: 75  
ISSN: 0306-9877 CODEN: MEHYDY  
COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 003 Endocrinology  
006 Internal Medicine  
029 Clinical Biochemistry  
030 Pharmacology  
037 Drug Literature Index  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
ABSTRACT:

Glucokinase (GK), expressed in hepatocyte and pancreatic .beta. cells, has a central regulatory role in **glucose** metabolism. Efficient GK activity is required for normal **glucose**-stimulated insulin secretion, **\*\*\*postprandial\*\*\*** hepatic **glucose** uptake, and the appropriate suppression of hepatic **glucose** output and gluconeogenesis by elevated plasma **glucose**. Hepatic GK activity is subnormal in diabetes, and GK may also be decreased in the .beta. cells of type II diabetics. In supraphysiological concentrations, biotin promotes the transcription and translation of the GK gene in hepatocytes; this effect appears to be mediated by activation of soluble guanylate cyclase. More recent evidence indicates that biotin likewise increases GK activity in islet cells. On the other hand, high-dose biotin suppresses hepatocyte transcription of phosphoenolpyruvate carboxykinase, the rate-limiting enzyme for gluconeogenesis. Administration of high-dose biotin has improved **glycemic** control in several diabetic animals models, and a recent Japanese clinical study concludes that biotin (3 mg t.i.d. orally) can substantially lower fasting **glucose** in type II diabetics, without side-effects. The recently demonstrated utility of **\*\*\*chromium\*\*\*** picolinate in type II diabetes appears to reflect improved peripheral insulin sensitivity - a parameter which is unlikely to be directly influenced by biotin. Thus, the joint administration of supranutritional doses of biotin and **chromium** picolinate is likely to combat insulin resistance, improve .beta.-cell function, enhance **postprandial \*\*\*glucose\*\*\*** uptake by both liver and skeletal muscle, and inhibit excessive hepatic **glucose** production. Conceivably, this safe, convenient, nutritional regimen will constitute a definitive therapy for many type II diabetics, and may likewise be useful in the prevention and management of gestational diabetes. Biotin should also aid **glycemic** control in type I patients.

CONTROLLED TERM: Medical Descriptors:  
\*non insulin dependent diabetes mellitus: DT, drug therapy  
\*non insulin dependent diabetes mellitus: ET, etiology  
drug potentiation  
enzyme activity  
pancreas islet beta cell  
insulin release  
glucose transport  
gluconeogenesis  
promoter region  
RNA translation  
enzyme inhibition

glucose blood level  
 drug safety  
 insulin sensitivity  
 insulin resistance: DT, drug therapy  
 insulin resistance: PC, prevention  
 skeletal muscle  
 liver metabolism  
 pregnancy diabetes mellitus: DT, drug therapy  
 pregnancy diabetes mellitus: PC, prevention  
 insulin dependent diabetes mellitus: DT, drug therapy  
 drug mechanism  
 human  
 nonhuman  
 oral drug administration  
 intravenous drug administration  
 intraperitoneal drug administration  
 clinical trial  
 review  
 priority journal  
 Drug Descriptors:  
 \*biotin: CT, clinical trial  
 \*biotin: CB, drug combination  
 \*biotin: DV, drug development  
 \*biotin: DO, drug dose  
 \*biotin: IT, drug interaction  
 \*biotin: DT, drug therapy  
 \*biotin: PD, pharmacology  
 \*chromium picolinate: CT, clinical trial  
 \*chromium picolinate: AD, drug administration  
 \*chromium picolinate: CB, drug combination  
 \*chromium picolinate: IT, drug interaction  
 \*chromium picolinate: DT, drug therapy  
 \*chromium picolinate: PD, pharmacology  
 \*glucokinase: EC, endogenous compound  
 insulin: EC, endogenous compound  
 glucose: EC, endogenous compound  
 guanylate cyclase: EC, endogenous compound  
 phosphoenolpyruvate carboxykinase (GTP): EC, endogenous compound  
 glibenclamide: DO, drug dose  
 glibenclamide: DT, drug therapy  
 antiinfective agent: CB, drug combination  
 (biotin) 58-85-5; (chromium picolinate) 14639-25-9;  
 (glucokinase) 37237-53-9, 9001-36-9; (insulin) 9004-10-8;  
 (glucose) 50-99-7, 84778-64-3; (guanylate cyclase)  
 9054-75-5; (phosphoenolpyruvate carboxykinase (GTP))  
 9013-08-5; (glibenclamide) 10238-21-8

CAS REGISTRY NO.:

18	49	post near prandial and (chromium or biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:08
19	8	post near prandial and (chromium and biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:19
20	33	glycemic near index and (chromium and biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:15
21	12	glycemic near index near food and (chromium and biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:15
22	16	glycemic near5 index near5 food and (chromium and biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:15
23	19	glycemic near5 index near5 food and (chromium or biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:15
24	20	glycemic near5 index near5 food and (chromium or biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:15
25	36	postprandial and (chromium and biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:20
26	33	(postprandial and (chromium and biotin)) not (post near prandial and (chromium or biotin))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:19
27	124	postprandial and (chromium or biotin)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:24
28	72	(postprandial and (chromium or biotin)) not ((post near prandial and (chromium or biotin)) or (postprandial and (chromium and biotin)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:21
29	26	postprandial and (chromium or biotin) and glycemic near index	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:27
30	49	(chromium or biotin) and glycemic near index	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:29

31	52	(chromium or biotin) and glycemic near5 index	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:29
32	3	( (chromium or biotin) and glycemic near5 index) not ( (chromium or biotin) and glycemic near index)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/10/25 18:29

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(FILE 'HOME' ENTERED AT 18:33:08 ON 25 OCT 2003)

FILE 'EMBASE, BIOSIS, EUROPATFULL, JAPIO, ADISCTI, ADISINSIGHT, ADISNEWS, BABS, BIOBUSINESS, BIOCOMMERCE, BIOTECHNO, CANCERLIT, CAPLUS, CBNB, CEN, CIN, CONFSCI, DISSABS, DGENE, DIOGENES, DRUGB, DRUGLAUNCH, DRUGMONOG2, DRUGNL, DRUGU, DRUGUPDATES, EMBAL, ...' ENTERED AT 18:33:23 ON 25 OCT 2003

L1 1227 SEA BIOTIN AND (SERUM (5A) (LIPID? OR HYPERLIPID? OR DYSLIPID?)  
L2 62 SEA BIOTIN (9999A) (SERUM (5A) (LIPID? OR HYPERLIPID? OR  
L3 39 DUP REM L2 (23 DUPLICATES REMOVED)  
D 1-  
D 31 IALL

FILE 'STNGUIDE' ENTERED AT 18:41:47 ON 25 OCT 2003

FILE 'EMBASE, BIOSIS, EUROPATFULL, JAPIO, ADISCTI, ADISINSIGHT, ADISNEWS, BABS, BIOBUSINESS, BIOCOMMERCE, BIOTECHNO, CANCERLIT, CAPLUS, CBNB, CEN, CIN, CONFSCI, DISSABS, DGENE, DIOGENES, DRUGB, DRUGLAUNCH, DRUGMONOG2, DRUGNL, DRUGU, DRUGUPDATES, EMBAL, ...' ENTERED AT 18:42:55 ON 25 OCT 2003

L4 1035 SEA BIOTIN (L) (SERUM (5A) (LIPID? OR HYPERLIPID? OR DYSLIPID?)  
L5 978 DUP REM L4 (57 DUPLICATES REMOVED)  
D 1-  
L6 939 SEA L5 NOT L2  
L7 192 SEA L1 NOT L4  
L8 189 DUP REM L7 (3 DUPLICATES REMOVED)  
D 1-  
D 188 IALL  
L9 293 SEA (POSTPRANDIAL OR POST PRANDIAL) AND (BIOTIN OR CHROMIUM)  
L10 224 DUP REM L9 (69 DUPLICATES REMOVED)  
L11 53 SEA L10 AND CHROMIUM AND BIOTIN  
L12 139 SEA L10 AND CHROMIUM  
L13 138 SEA L10 AND BIOTIN  
D 1-  
D 123 KWIC  
D 115 KWIC  
L14 86 SEA L12 NOT L13  
D 1-  
D 86 KWIC

d his ful

(FILE 'EMBASE, BIOSIS, EUROPATFULL, JAPIO, ADISCTI, ADISINSIGHT,  
ADISNEWS, BABS, BIOBUSINESS, BIOCOMMERCE, BIOTECHNO, CANCERLIT, CAPLUS,  
CBNB, CEN, CIN, CONFSCI, DISSABS, DGENE, DIOGENES, DRUGB, DRUGLAUNCH,  
DRUGMONOG2, DRUGNL, DRUGU, DRUGUPDATES, EMBAL, ...' ENTERED AT 18:42:55  
ON 25 OCT 2003)

DEL HIS

L1 99 SEA GLYCEMIC (5A) INDEX AND (CHROMIUM OR BIOTIN)

L2 68 DUP REM L1 (31 DUPLICATES REMOVED)

D 1-

D 57 IALL

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